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THE
PRESERVATION OF THE TEETH.



A

FAMILIAR TREATISE

ON THE

PRESERVATION OF THE TEETH.

BY

H. NICHOLS WADSWORTH, D.D.S.

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TO
JOHN FREDERICK MAY, M.D.,
PROFESSOR OF
THE PRINCIPLES AND PRACTICE OF SURGERY,
IN THE
NATIONAL MEDICAL COLLEGE, WASHINGTON CITY,
AS A

Testimonial

OF HIS HIGH APPRECIATION OF HIS TALENTS AND SKILL,
THIS WORK

IS RESPECTFULLY INSCRIBED BY

HIS OBLIGED FRIEND,

THE AUTHOR.



PREFACE.

SCARCELY a day's operations have passed, that it is not found necessary to direct the attention of patients to some one of the hints embodied in the following pages. To do a little good; to increase attention and more properly direct it; to throw more light upon our profession and advance its standard in the minds of the enlightened; disclaiming all other objects, to be of service to his patients has alone dictated these pages; and the Author has endeavored to render them sufficiently brief to insure a perusal. If they accomplish *any* good, he will feel himself rewarded.

WASHINGTON CITY, D. C.,
September, 1853.



THE PRESERVATION OF THE TEETH.

So many questions are asked, and of such a variety, by patients who seat themselves in a dental chair, that it takes no inconsiderable time to answer them. Such grave astonishment is evinced when, in answer to the question, "Why do my teeth decay?" the conscientious operator is often obliged to answer, "Because you do not take good care of them!" This answer is given, too, in many instances, to those who pride themselves upon their care; evincing, as it does, that *great* care may be inadequately applied: that labor without knowledge is often thrown away; that a proper application of their pains would insure a perfect and beautiful set of teeth. There

are so many who do not visit a dentist, who would yet highly appreciate advice from one that would prove practically useful, that it has been intended for some time to embody such hints and advice as may become useful in a little book, in plain, untechnical language, that any one who reads may understand ; using such names as are generally understood by patients, and avoiding everything that can confuse the plainest understanding.

In order the better to understand what we must do to preserve our teeth, it is necessary, first, to gain some knowledge of what they are composed ; this every one should know ; and knowing this, almost any one will be aware of the agents that injure them, and thus be enabled most effectually to guard against their destruction.

First, then, let us find out the composition of the teeth ; and afterwards we will discuss the causes of their decay, and the best methods for preventing their loss.

An analysis of the bone of the permanent teeth gives for 100 parts,

Phosphate of Lime	-	-	64 parts,
Carbonate of Lime	-	-	6 do.
Cartilage	-	-	20 do.
Water and loss	-	-	10 do.
<hr/>			
			100 parts.

Here it will be perceived at a glance, that lime forms three fourths of the constituents of the bone of a tooth ; after the crown of the tooth is formed, and before it cuts through the gum, a shield coating or enamelling is placed over it as a protection from injury, and also to impart a polish and finishing beauty ; as tin is covered over iron, forming our present tin ware ; and as glazing is put over the clay of the potter, at once to beautify and preserve. Upon this enamel depend, in a great measure, the beauty and preservation of the teeth. Few persons take the necessary pains to insure their preservation after the enamel is gone, and it becomes a duty of the utmost importance to know what composes this enamel, and to take every precaution in our power to save it from destruction.

Analysis of 100 parts of enamel gives,

Phosphate of Lime	-	-	78 parts,
Carbonate of Lime	-	-	6 do.
Cartilage	-	-	0 do.
Water and loss	-	-	16 do.
<hr/>			
			100 parts.

Here again it will be seen that *lime* predominates still more ; making up, with the exception of 16 parts, the whole 100, or more than five-sixths of the whole, giving hardness, whiteness, and a beautiful polished expression.

Now having ascertained what composes the enamel, we must examine the tooth and find out where it is weakest, and what causes its destruction ; for by knowing where it is weakest, we shall guard these places the more carefully.

This enamelling or coating is hard and brittle, nearly as much so as glass ; hence we often see cracks in the teeth, particularly in the front ones ; these cracks are generally caused by hot and cold drinks, or by sudden transitions from one to the other ; by eating iced cream, and

watered ices when heated ; and by inhaling exceedingly cold air after leaving a very warm room : when seen on the back or grinding teeth, they are often caused in the same way, but more often by grinding very hard substances, by cracking nuts, and other improper uses of the teeth. These cracks, when in full view on the front teeth, do not generally originate decay if they are kept clean ; but between the teeth, and on the grinding surfaces of the back teeth, they are sure to develope decay, although its progress may be slow, and the patient totally unconscious of it ; when occurring on the grinding surface of the back teeth, they are almost invariably caused by violence, such as cracking nuts or hard candy, are generally more extensive in their nature, and almost sure to ruin the tooth unless the fissure is closed by a gold stopping. These cracks are almost always *inexcusable* ; showing, as they do, a carelessness in the use of these valuable organs that cannot be too severely censured. Within the last week, a young gentleman of about twenty-five years of age has been in my hands, whose teeth are of that firm, dense character, that with

care should have remained perfect during his whole life, with, perhaps, a little assistance from art ; yet there is scarcely a grinding tooth in his mouth that does not require two, three, and four plugs ; many of these decays, too, are dangerously large and deep, requiring the utmost caution and care to preserve the nerves of the teeth and laborious operations to stop them ; all this has been caused by a foolish habit of cracking nuts with his teeth, and very little attention in cleaning them.

The enamel or protecting coat is placed thickly on the grinding teeth, where they are intended to antagonize or strike in the act of masticating food with those in the opposite jaw, that they may have the power of resisting long and continued use : it is more thin between the teeth, and gradually tapers off, until it terminates at the edge of the gums ; the organs that deposit the enamel are destroyed when the tooth cuts through the gum ; hence the necessity of carefully preserving this coating uninjured, for once destroyed it can never be replaced.

Disease is generally found to have commenced

first in the concave or depressed centres of the grinding teeth : there are four of these teeth that make their appearance through the gums, two above in the upper and two below in the lower jaw, so soon after the child has got its full complement of 20 temporary teeth, and immediately behind them, that parents are apt to confound them with the temporary teeth, and under the very erroneous opinion existing generally that the temporary teeth are unworthy of care or attention, these four permanent ones are lost like the others : great surprise is often manifested when the guardian of a child is informed that four of the permanent teeth are gone beyond the hope of saving. The centres of these teeth, as well as the other grinding, and also those called "half grinders" a little in front, have deep concave centres or fissures, and present prominent points which allow of deposits of food, and the different injurious juices which at the temperature of the mouth soon become irritating cutting acids ; uniting with the lime of the enamel, they penetrate into the bone of the tooth ; or these irritating fluids and solids only need the slightest crack in

the enamel or fissure, caused by cracking nuts, or violence of any kind, to penetrate through to the bone. Once through this protecting covering, and their action is rapid ; once securing a well defined entrance, and it is next to impossible to prevent the progress of the disease. The bone, too, being less capable of resisting an injurious action, gives way with tenfold rapidity ; whilst the enamel remains almost perfect--(excepting this slight entrance) the tooth often is utterly ruined before a patient even dreams of a decay! In these instances no pain generally is perceived until the work of undermining has gone on so as to render the whole internal bone soft and spongy. The tooth then goes with a crash, and pain generally follows, with an application to a dentist for relief, when the chances of success are doubtful and the expense doubled.

The next point generally attacked is the same depressed places in the four grinders following and placed farther back ; a crack in the enamel is caused by a nut, a piece of hard candy, a bone, or otherwise ; or the constant lodgment of food or acid fluids : finally, upon a point perhaps no

larger than half a small pin's head ; no efforts of the brush can keep this place clean, and though care may retard, it cannot stop the disease ; a thorough exclusion of everything by gold will alone effect the object permanently. The enamel is not so thick in these depressed parts of the grinders, and consequently they cannot resist a diseased action so long as the more prominent points can. Requiring then the *most* care, they generally, from the difficulty of getting at them, receive the least.

The next point where disease is observed is between the " half grinders ;" these teeth are eight in number, four in each jaw, and immediately behind the eye teeth. They are generally crowded tightly together ; the enamel is not very thick on the sides that are crowded ; food lodges between them, undergoes fermentation, and decomposition acts steadily upon the enamel, a slight entrance is made through this covering, and but little time suffices to ruin the tooth. These teeth are generally the first ones lost, because it takes the decay less time to reach a point where pain follows than in the large grinders. They are teeth,

too, where poor and indifferent operations prove of but temporary benefit, a large plug in the sides of one of these teeth being one requiring as much time, patience, and skill, as almost any operation in the mouth ; look around and see how many are toothless at these points.

The front teeth come next, exposed to hot and cold drinks, to sudden inhalations of cold air, to a crowded condition, and often the last is so bad as to occasion lapping of one over the other ; they often decay from the entrance of injurious fluids through thin cracked enamel ; from their crowded state deposits lie constantly between them, and destroy their enamel ; when they lap, they at this point almost invariably decay, but being in front of the mouth they necessarily receive more attention and care, and therefore from this cause hold out longer ; they are of a shape, too, which renders them more easily cleaned ; and if of a tolerably good quality, and not touching each other, will hold out longer than any of the others, even though they receive no care at all.

There is one cause of trouble in these teeth that

ought not to be overlooked, although an enlightened community are becoming sensible of its dangers: we allude to the practice of cleaning them with acids, sometimes by the patients themselves, but oftener by dental operators. This soon causes decay to show itself near the gum on their external surface. Take a microscope and look at your teeth after having been cleaned by an acid, and you will find the beautiful covering that has been placed there for their protection, penetrated by innumerable little holes; the acid unites with the lime of the tartar and softens and removes it beautifully, but it has an equal affinity for the lime of the enamel, and rapidly acts upon that; and all persons can realize the serious injury done to their teeth, at the expiration of about a year, by a dark line around them near the gums, which no effort on their part will remove. This is occasioned by the little holes caused by the acid, being filled by a deposit of dark greenish tartar. The teeth once indented in this manner cannot be kept clean, and collect every injurious deposit circulating in the mouth, until the little holes become deeper and deeper,

finally passing through the enamel, the destruction of the teeth is certain, unless soon arrested by plugging. The mischief of having the teeth cleaned improperly can hardly be appreciated by any but a person well acquainted with such matters. Itinerants sometimes go around doing this kind of work for a trifle ; five years after a hundred dollars will not reetify the evil in a scientific manner.

Having previously indicated the points where disease generally attacks our teeth, we will now endeavor to explain the cause of disease, and the manner of its action ; and now we must remember the principal ingredient in the formation of the enamel or protecting coat is *lime* ; that any article taken into the mouth having an affinity for lime, will unite with the lime of the enamel and destroy that ; then its progress is still easier on the lime in the bone of the tooth, and a frequent repetition of this action finally reaches the nerve, when pain and trouble follow. All, or *nearly* all, teeth are destroyed by the action of external causes. In my own practice, few, very few teeth have passed under my obser-

vation, where I could not trace the commencement of their decay to an external opening, or to external violence. Lime being the principal ingredient in the formation of enamel, any article having an affinity for lime must, as stated before, act injuriously upon the teeth. Acids then of whatever kind have an injurious action upon this covering ; fruits of all kinds have a greater or less action, in consequence of the acid they contain, and more or less powerful, according to its strength. Many persons, owing to the density and thickness of the enamel, are not aware for years, if ever, that fruit has ever had any effect upon their teeth ; others again, with thin enamel of a white chalky appearance, cannot bite an apple that is rather "tart," without a disagreeable action being felt immediately, and their teeth becoming "edgy ;" this is owing to the very action above described. It is my own case, and nothing would tempt me to bite a pickle or lemon. It is always my habit to cut and pass them to the back teeth, which, being less sensitive, are not so rapidly acted upon. Lemons, pickles, raisins, vinegar, have a much

more rapid action than the milder fruits, yet they all act with more or less injury to the enamel; slowly and imperceptibly on some, and rapidly and fatally on others. Take a tooth with enamel of medium quality, place it in the juice of lemon (citric acid), and raise its temperature to that of the mouth, and in 36 hours it will entirely destroy the enamel, and work its way well into the bone of the tooth. The juice of a sour apple or vinegar (acetic acid) would take a little longer, but not be the less certain; whilst the juice of a raisin (tartaric acid) at the temperature of the mouth, will destroy the enamel in about 28 hours! Thus we see the rapidity with which our teeth are acted upon—yet ordinarily this action is slow; our vinegar, lemon-juice, &c., is diluted with water and with the saliva of the mouth, and it takes years of constant neglect on our part to destroy what we might and ought to care for and preserve; the wonder is that they last so long, and *not* that they go so soon, when it is taken into consideration in how many ways we do them violence. It must be borne in mind that this injurious action does not stop,

but, passing immediately on, acts still more rapidly upon the bone, and soon finishes its work by reaching the nerve, which, once fully exposed, commences to be disorganized, and, after this, the tooth can by no operation be made as serviceable and valuable as before, though it may be still made useful by judicious operating.

Having now spoken in a plain manner of the commencement and location of disease in our teeth, we shall endeavor to point out such errors as have fallen under our observation, and to trace out such a course as, if properly and fairly followed, will obviate many of our troubles, preserve many valuable teeth, and decrease the expense attending the preservation of others.

First, then, we take up our children's teeth, and it will not do to omit a few hints regarding the teething of infants. That many suffer from this cause most terribly, the recording tablets of thousands of parents, who have been in agony over a moaning child, can testify but too well; and it is because imperfect attempts at lancing the gums, and objections even to attempting it, have so often fallen under our notice. Such

timidity in executing, also, on the part of medical men, that it appears a *duty* to urge its utility, not only upon parents, but on those medical men who do it so reluctantly, or refuse to do it at all. In every case where the symptoms are becoming alarming, and in many cases when they are not, it is advisable to assist nature in this matter. Suppose we do occasionally hear of a death from excessive bleeding, from too free or too careless lancing of a child's gums, it does not occur oftener, perhaps, than from bleeding from other causes ; and, besides, where one case of death from this cause can be found, a hundred can be easily produced where death would not have occurred if the gums had been thoroughly lanced. When it is remembered how tough and unyielding are the gums over the teeth, it is a matter of surprise that the teeth get through them as easily as they do ; and knowing, as we do too, that a severe cut on the gums of an adult will often give little pain, and heal in a couple of hours, it appears but an act of common sense, when we know and see violent symptoms, evidently the result of the over-tasked efforts of nature to

throw out one or more teeth, when we can even see, as a skilful eye generally can, the distinct outlines of the teeth through the gums rendered white and bloodless by the pressure, it seems but an act of common sense to pass a lance freely and thoroughly down to these teeth, and open a passage for their escape. When we say thoroughly we do not mean a timid, half-determined prick of the lance, but the determined and effectual passage of the lance to the tooth, and a cut of the same size as its cutting edge (if on the front teeth), which generally are the ones that cause the most trouble ; or, if on the back ones, a cut across and one at right angles across the first, or a circular cut following the points most prominent upon the tooth ; but what in my opinion is better than either, is to at once remove a circular piece of gum from over the tooth. These cases and symptoms fall generally and properly under the medical practitioner's care, and they are alone responsible. We can only urge upon them a freer and more frequent use of the gum lance in first dentition, as the certain means indicated by common sense to save the lives of many.

children that otherwise are lost, and in using it to adopt it at an earlier stage of the symptoms. At about two years of age, most children can show a pretty respectable front of these pearls so beautiful, so useful, and so necessary ; children at this age, who have had their daily ablutions, their hair cut, their little nails clipped and cleaned ; every *external* part, from head to foot, thoroughly and carefully cleansed ; every part sweet except the mouth ; the reservoir that receives and prepares every particle of food, fluid and solid, ere it enters the stomach to sustain life and vitality ; to nourish and sustain all the functions of the body, and upon which they all depend, wholly and absolutely—this reservoir is foul with the mucous collections of the night, and the decomposed and offensive food deposited, and lodging in and around the teeth during the day. Do not tell me, then, it is strange your children's first set of teeth come and go so rapidly ; it is not at all strange. If you were never to apply a comb or brush to the hair, would any one wonder at gross and impure collections, engendering disease of the skin, and coarseness, decay,

and death of the hair. Is it a wonder that we often see dyspepsia showing itself even in childhood, when decayed teeth, ulcerated, unhealthy gums, render a proper mastication of the food almost impossible, and it is passed, half prepared, into the stomach, laying the foundation, in our very childhood, of a disease that destroys more teeth than any other ; for the acid stomach, resulting almost invariably from dyspepsia, is frightful in its ravages upon the teeth ; and few, *very* few, are sufficiently cautious to save their teeth when their stomachs are decidedly and continuously acid. How then can any other result be looked for than the decay and loss of the temporary teeth if no care or pains is taken to preserve them ? Now arises the foolish remark so often heard, “ Oh, they are of no consequence ! they will soon be replaced by others ! I hope *they* will be better ! ” What, has nature given our children organs that are valueless ? acknowledging their value for mastication and articulation, does their value here cease ? can we trace no other purpose of their formation ? Let us see : at four years of age, or about this period (for let

it be remembered that a year more or less is no unusual variation in the cutting of any of the teeth), it is supposed that a child should have ten teeth in each jaw ; from that period until six years of age the child continues to grow, and, as before, the jaw to expand in every direction, but especially in length, so that nature at six years of age may have room behind these ten teeth to add four more, two above and two below ; but these are not temporary but *permanent teeth* ; they are not placed in what is properly called the temporary, but in the permanent jaw, by an increase in the length of the temporary. Please to understand that at four years of age the rudiments or pulps of thirty-two permanent teeth lie hidden in the child's jaws, under and around the twenty temporary teeth, or rather the twenty front permanent ones lie under the twenty temporaries, and the other twelve lie farther back in the yet ungrown and unexpanded jaw. Now then we shall suppose, at three years of age, a child, crying with a violent tooth-ache, is taken to an operator, and the offender ordered out at all hazards. At this age pain generally lies in

one of the infant grinders ; under these grinders lie the pulps of the half grinders of the permanent set ; and which, under the expansion and elongation of the jaws, are generally looked upon as front teeth. If the operator does not remove or injure this pulp at the time of the extraction, of which there is great danger, it must be remembered that three, four, or even seven years may elapse ere nature is ready to push this half grinder through to supply the place of the temporary one taken out some years before ; the bone of the jaw lies, in the mean time, very much contracted at this point in consequence of this extraction, and there being little or no room for it, a crowded, crooked, and irregular tooth, often injured before its eruption, presents itself to decay and destruction like its predecessor ; yet if this temporary tooth is not extracted, the irritation and fever produced by pain often cause various derangements of the system, and have a bad action on the deposit of enamel that is going on all the time in the jaw upon the crowns of the permanent teeth. We do not extract a temporary tooth for a child except impelled by some

urgent and necessary circumstances, or until nature says, "It is in my way, remove it;" indicated by looseness, and often by the appearance of the permanent one near it. Pain in the temporary teeth often occurs at three and four years of age, and is a loud trumpet-like voice to parents and guardians, to correct this erroneous impression, and to commence, as soon as an impression can be made upon the child's mind, to clean its pretty little masticators as regularly as they are washed, to pick the food from between and around them; adopt a system of rewards and punishments for the daily attention to this matter as soon as children can learn to do it themselves; and let the clean teeth and mouth be a *sine quâ non* to appearance at the social board in the morning, and the last thing to be done at night, ere their little hands are clasped in prayer to the God of love. Begin as early as two years of age; provide a small brush, a little powdered chalk, a cake of nice soap, and a good quill tooth-pick; clean their teeth thoroughly every morning with chalk, brushing particularly the gums and the grinding surfaces of the grinding

teeth. After every meal learn them to pick every particle of food from the indentations and from between them ; if they will rinse the mouth, or brush them afterwards, so much the better ; at night use the brush again and a little soap, and after this never let them put anything more in their mouths ; the habit of eating as one retires, leaving the food in and around the teeth, cannot be too severely censured. In a little while these habits will become fixed, your child will learn to do it for its own gratification, and by being particular in insisting for a while upon its being well done, the habit will become fixed ; a habit of cleanliness that will never be forgotten or omitted in after life ; a necessary and admirable habit in itself, to say nothing of its benefits. If the child has inherited a feeble constitution, poor and defective teeth, and bad, spongy gums, then it becomes all the more necessary and useful. If the constitution is good, and the teeth good, Oh, let me urge upon you, to do everything in your power to prevent a degeneration ; leave not to neglect and decay those beautiful necessary ornaments.

From six to eight years of age we must begin to look for a loosening of the front teeth ; the advice and assistance of the dentist should generally commence about this period ; the temporary now giving place to the permanent teeth, should be closely watched, and the causes of irregularity guarded against as much as possible ; very disfiguring ones can at this time be wholly prevented by a little attention and trouble.

From the sixth to the twelfth year the second teeth follow each other in pairs in rapid succession, and at this time commence, and progress with the greatest rapidity, the decays that are found to have destroyed more or less of the second teeth by the time the patient has become sensible of their value, and thinks of consulting the dentist, say at twelve or fourteen years of age. Up to this period many pay little or no attention to them, and the extraction of a half dozen then becomes a preliminary step to a successful return to health ; here then the judicious advice of a dentist is required, by occasionally consulting him, the temporary are not allowed to crowd the permanent ones from their proper

arch ; the four grinding teeth which follow almost immediately after the full set of temporary ones are obtained, but immediately behind them, it has been previously stated, owing to neglect, early show decay in their concave and depressed parts ; these are at once cleaned and stopped with gold. This is the commencement of that art which is in the hands of a skilful operator of such acknowledged utility in the preservation of the teeth. A tooth of ordinarily good composition, when the disease is carefully removed, the cavity dried and kept dry, and the gold stopping put in dry, thoroughly packed, the edges full and perfect, the whole stopping and the surrounding bone smooth and highly polished as a mirror ; operated upon in this way, a tooth well taken care of afterwards, is as good as one that has never been decayed. This operation finds more and more favor daily, because there are members in our profession who have solemnly declared to each other and to the world, that they will *prove* its title to consideration and respect. There is no city in the Union where there is a higher standard ; where finer operations are performed ;

those requiring delicacy and skill of a high order ; and, like other cities, operations are daily performed, alike injurious to the patient, the operator, and the profession. Intelligent people and the medical profession are beginning to appreciate the difference between thoroughly educated dentists ; those who never cease to consider themselves students and hard ones too ; and those that spring into existence, knowing *too much* to learn *more*. They begin to appreciate the fact, that an M.D. alone does not qualify one to practise dental surgery in any of its branches. However well it may answer as an assistant to a more important title, they are beginning to understand that the special studies and manipulations demanded by our own colleges are those to be most relied upon for accomplishing the dental practitioner ; and those in our profession who sincerely desire to elevate the standard of professional merit, hail with pleasure the certainty, that the day is not far distant when the degree of D.D.S. will be alone the test of the qualifications of a practitioner of dentistry, and a *sine quâ non* with the public.

A few remarks at this point may not be inappropriate, and may be of service in assisting patients to form some judgment upon the character of the operation they may be undergoing. We consider *filing*, that much abused operation, as first in our manipulations, in proper hands valuable and useful ; a coarse file should be followed by a fine one, that by polishing powder and a burnisher, until the bone is left as smooth as glass, with no angles and no cavities to catch and retain the injurious substances taken into the mouth. In packing the gold into a cavity the utmost attention in our opinion is necessary to drying and keeping the cavity dry, as well as the gold that is put into it, to the perfectly rendering solid the stopping, to leaving that and the surrounding bone level, uniform, and highly polished, every angle of the cavity should be well examined, and made solid with gold, and every scratch on plug or tooth removed with fine file, powder, and burnisher. It is useless to suppose all this can be done without time, patience, and care ; that an operation can be well done when only one-fourth or one-eighth the time

required has been devoted to it ; it is useless to suppose such an operation has been performed, when the charge is less than the *value* of the gold used, and when the charge for the time employed is often expected to be in comparison to a mechanic's wages ; it is useless to expect honesty from a rogue, or honorable transactions from dishonorable men. In many cases the teeth of young persons can be pressed apart, the operation performed, and then returned to their original place ; when this can be done it should, and the separation only made sufficient to keep them from touching. When a decay is shallow, it can often be removed with a cutting instrument and fine file, leaving the surface level, then by polishing the bone is left in a perfectly healthy condition, and if kept clean no fear need be experienced as to the result.

We now come to speak of general operations, and the best course to pursue after arriving at an age when all the teeth, that is, 14 in each jaw, are complete (the four wisdom teeth do not follow until some years afterwards). If up to this period any of the front teeth remain irregular,

they can be straightened and set straight, but with considerable labor, and some pain. When you go to an operator, satisfy yourself who he is, and what he is, then make up your mind, if you trust him at all, to do it thoroughly, to give him your confidence ; when you ask his advice, state your symptoms in a straightforward manner and do not occupy his time with long stories ; when his advice is given, accept it, remember and act upon it, and do not ask the same questions over again ; keep your engagements punctually, remembering that time is always valuable to a good practitioner. Having had your teeth put in thorough order, prove that you appreciate your operator's services by taking good care of them afterwards ; in masticating your food, change from one side of the jaws to the other, otherwise your mouth will in time become onesided ; after rising in the morning, give your teeth a thorough cleaning with some powder recommended by your dentist ; in the absence of that use finely pulverized chalk ; in brushing be particular in removing the mucous collections of the night ; brush your gums also thoroughly ; this

collection of mucus is easily removed ; but if left, it becomes tartar, and requires an instrument for its removal ; do not forget to be particular in making the back grinding teeth near the gums clean ; here the muscles of the cheek bind in passing, especially when the mouth is open, so that the end of the brush striking against these muscles does not clean these teeth at all, and decay is almost sure to be found where patients have not been cautioned in season ; if the brush will not reach these teeth near the gums, use a soft stick or a rag and the finger. The brushes of the present day are not at all adapted to this defect, and it is the author's intention to have some made to obviate this difficulty. The hollow depression in the grinding teeth, and the spaces between the teeth, should be thoroughly freed from food after every meal with a quill tooth-pick or a palette, and if convenient, finish cleansing them with a brush and water. The pick should never be dispensed with ; when you retire to rest use your pick to see no food is lodged between the teeth, then brush them thoroughly with water and a little soap on your brush, or

a little soda and water : once or twice a week a piece of tape or floss silk with a little chalk used between the teeth, (especially where they have been stopped or filed), to keep them well polished, will be of vast service ; a pine stick and chalk can be used when deposits exist that the brush does not remove. Dr. Parmly, of New York, has invented a silicious stick for polishing the teeth, and also a tongue scraper, both of which are useful. When patients are on a sick bed too much care cannot be taken with their teeth ; a glass of gum mucilaginous water should be at hand to rinse the mouth with, previous to using acid medicines ; these medicines should then be taken through a glass tube, a glass of soda and water should then be at hand to rinse the mouth, and neutralize the acid at once, and prevent its action upon the teeth ; physicians are entirely too negligent in this particular ; the daily use of acid medicines on unprotected teeth does terrible mischief. Patients who have been salivated cannot be too particular ; tartar almost immediately commences to form around the necks of the teeth, driving away the gums and rendering

them spongy and unhealthy ; immediate energetic and decided treatment is demanded in these cases, but nothing is available in saving the teeth unless scrupulous care is exercised on the part of the patient. When the teeth are far gone, and a patient does not intend consulting the dentist, it is a good plan to fill the cavities with charcoal ; it retards decay, and neutralizes the decomposed food that collects in the cavities.

Patients desiring artificial teeth should see that they are made so as not to drag by their clasps upon the natural teeth ; when they do drag, the teeth around which the clasps spring will soon become loose and destroyed. Scientific operators are now beginning to discard clasps almost wholly, and to sustain thin plates by the accuracy of the fit, and by an air chamber, even when inserting but partial sets ; such plates require more labor, but once accustomed to such, the patient will tolerate no other. An artificial set of teeth require to be fully cleansed from food after each meal, and especially must the clasps be freed from food, otherwise the enamel will soon be destroyed. Artificial sub-

stitutes should never be left entirely to the mechanic ; it is a study in itself, requiring the utmost skill, knowledge of the parts, and artistic taste ; with the best mechanical genius, uncombined with other essential qualifications, a scientific set of teeth cannot be expected ; disappointment and disgust must be the result : the profession suffers in consequence : we have seen the most beautiful specimens of mechanical dentistry, as far as mechanics were concerned, that were no more adapted to the purpose they were made for, than though made by guess ; artificial work looks beautiful in cases, but commend us to our patients, who, wearing isolated or whole sets of teeth, pass through the world with their operator unknown, simply because no one dreams of their having had recourse to art ; commend us to a patient who can open his or her mouth and show the tooth far advanced in decay over which we spent hours of time years ago, that tooth remaining a natural, healthy, beautiful, and useful ornament, prized by the owner, and a source of pride to the operator ; commend us to the patient who feels that honest skill and patient industry have

been expended upon his mouth ; that understands us when we say, Go, we have done all that we can do for you, honestly and faithfully, remembering that as we know the value of our operations, and respect ourselves and our profession, we shall be happy to do anything more for you that you may require at a future day, but when we again examine your mouth, if we find an inattention to our advice, and want of the necessary care to insure permanence in those operations we have already performed, we can operate for you no more.

Placed as the teeth are as a guard to the organs of the mouth, stomach, and lungs, performing the first and most important act in the great and important action of digestion ; this first great action of mastication being imperfectly performed, the certain want of equilibrium that results, filling the lips and cheeks, forming the contour, beauty, and expression of the features of the mouth and face, imparting its youth and beauty of expression, forming and regulating the articulation of sounds and imparting to them their glorious harmony, combining, as they do in

a thousand ways, to beautify, interest, and improve, who can think of their loss and not shudder?

It seems strange that these organs, so beautiful, so useful, and so indicative of blood, of refinement of taste, so necessary to charm, ah, and that go so far to add to the charms of a countenance, it seems strange that one values them so lightly, speaks so indifferently of "letting them go and having artificial in their place!" A common thing is to see great attention paid to the front ones, whilst those farther back are left to themselves, the patient caring nothing for the unmas-ticated food, diseased gums, decomposed food, lodging in the cavities, sending out a foetid breath into one's face and into their own lungs.

When a tooth can be restored to health by a judicious, skilful operation, you have what the most cunning artist in the world cannot give you artificially; no money can buy, no art can restore what you lose in good natural teeth.

As you love nature and abhor art, as you abhor badly articulated words, bad breath, bad digestion, an unnatural expression of face, a

troublesome unnatural something in your mouth, requiring time, pain, labor, and expense to get it, and trouble and mortification to keep it there, as you abhor all these evils, let me advise you to value, preserve, and retain your natural organs by every means in your power, as long as you can ; for be assured you will weep bitter tears of mortification and regret, when too late, at their loss.

Thus in a plain, untechnical manner, having touched upon those matters which are necessary to be understood, in order to the more effectual preservation of the teeth, the author, disclaiming any motive but the good of his patients and the elevation of his profession, submits this little work to their kindly examination, in hopes it may be of practical utility.

THE END.



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